43. The Forest-Survey-Party continued the topographical survey of the Sirsi-forests in the Southern Division of Kánara. During the survey-year ending 30th September, 1892, the details for 195 square miles, on a scale of 4 inches =one mile, were completed at a cost of Rs. 16,657. The triangulation of 200 square miles and traversing of 295 square miles cost Rs. 9,951. The cost incurred, in all, was Rs. 26,608. The cost per square mile of completed area amounted to Rs. 85 for work done on the 4-inch-scale.

44. Sixty-eight square miles were also surveyed, in Kolába, on the 8″ scale, at a cost of Rs. 13,974, or of Rs. 205 per square mile.

45. The *average* cost per square mile of the area surveyed during 1892-93 was Rs. 116.

46. The area completed during the year 1891-92 was 300 square miles on the 8″-scale at a cost of Rs. 35,138. The average cost per mile was, therefore, Rs. 112 against Rs. 205 in 1892-93. The falling-off in the area completed during the past year is attributed by Colonel Hutchinson, the Superintendent, to sickness among the surveying-establishment. It, also, seems that his Assistant was engaged in triangulation in Kánara almost until the close of the year and that, in consequence, he was not available to superintend detail-work elsewhere.

47. The following shows the approximate area already surveyed and that remaining to be surveyed in the several Divisions of the Circle :—

Division.	Area surveyed.	Area remaining for survey.
	Sq. Miles.	Sq. Miles.
Northern Division, Kánara	627	562
Central Division, Kánara	395	677
Southern Division, Kánara	233	1,055
Belgaum	.....	691
Dhárwár	103	329
Bijápur	.....	245
Kolába	84	361
Ratnágiri	.....	20
Total ...	1,442	3,940

48. The survey was commenced in 1886. Since then, the average outturn per annum has been 206 square miles.

49. To complete the special survey of the forests of the Circle, at an average annual rate of progress of 300 square miles, would take 13 years, and the cost would be about Rs. 4,00,000. The survey-charges are a heavy drain on the forest-revenue, and at least double what they would be if details, in the survey of forests of minor importance, not required for forest-purposes, were left out.

50. Appendix in Form 49 of the Forest Code shows the areas surveyed and under survey during the year under report.

CHAPTER II.

MANAGEMENT OF STATE FORESTS.

I.—REGULATION OF MANAGEMENT.

(*a*) Working-Plans and their Control.

51. During the rains, both Working-Plans' parties remained in charge of Mr. Hodgson. From the beginning of the working-season, in November, until December 13, Mr. Murray was in charge of Party I in addition to his duties as

Divisional Officer, Belgaum. During that period, the work of the Party was confined to marking off the inexploitable portions of the area, in Belgaum, from which fuel is obtained for the Southern Mahratta Railway. After clearing and surveying 65 miles of 5-feet rides round the inexploitable portions of this area, and after surveying the *coupes* already exploited, the Party proceeded on February 9 to Sámbráni, in the Northern Division of Kánara, with Mr. Mainwaring, who, on his return from furlough, was placed in charge of the Party.

52. At the beginning of the working-season, in November, Mr. Hodgson was directed to take up the teak-forests of Gund with Party II. On March 4, after collecting the *data*, and forming and surveying compartments, for 9,888 acres of the Gund-series, as the Party was suffering severely from sickness, the completion of that series was deferred, and Mr. Sátáráwálá, with two surveyors and a forester, was despatched to Kolába to mark off *coupes* of the Karjat and Khálápúr Working-Plans; this work occupied them until the end of the season. At the same time, Mr. Hodgson was deputed to assist Mr. Mainwaring in the Supa-táluka of Kánara. He joined that officer at Tátwhál on March 5, and remained with him until the end of the season.

53. The work accomplished by No. II Party during the year was, therefore, the examination, formation of compartments, and collection of *data* necessary for the preparation of a plan, for 9,888 acres in Gund. Also the marking-off of *coupes* in Khálápur and Karjat as laid down in the working-plan for those Ranges for 1892-93.

54. The work done by Mr. Mainwaring's Party, No. I, assisted during March, April and May by Mr. Hodgson, including the survey-work in Belgaum already referred to, was the differentiation and examination of the Addígeri-series of 10,105 acres, the examination of the Singatgeri-series of 17,562 acres, and of Dándéli-series of 15,383 acres. The breaking-up of the area into compartments (differentiation), and the taking-up of test-areas for the two latter series had been previously carried out. Mr. Mainwaring reports that plans for the working of these 3 series will be prepared during the present rainy season (1893).

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55. The statement in paragraph 41 of last year's report is not quite correct. The figures in column 10 show the area for which compartments were formed and enumerations made, but no working-plan had been formed for that area. The heading of the column should have been "area for which *data* for the preparation of working-plans have been collected."

56. Last season's progress was retarded by several circumstances, notably the increase in the proportion of area enumerated to total area dealt with: the increase was the difference between 8 per cent. and 25 per cent. Other retarding circumstances were sickness in the ranks of both parties, changes of Divisional Officers in charge, absence of one Divisional Officer from 12th April until 11th November, 1892, absence for 2 months of part of Party II in Kolába, and want of experience of both Divisional Officers. Mr. Hodgson only joined the service in December, 1890, and was put in charge of Party II in April 1892. Mr. Mainwaring only took over charge in December, when he was quite new to the work and the district; he also suffered from illness.

57. The area for which working-plans have been submitted is 78,317·46 acres. Mr. Bell has submitted a report for 63,569 acres, and Mr. Hodgson one for 14,748 acres. Both these plans had to be returned for revision and resubmission during the current rainy season (1893).

58. The work done in the Circle, up to date, is, therefore, as follows:—

(1) Area for which plans have been submitted, but which are now being revised—78,317 acres.

(2) Area, not noted under (1) for which all the *data* have been collected, and for which plans are to be submitted by the end of the monsoon (1893)—43,052 acres.

(3) Area not included under (1), or (2), but which has been split up into compartments and for which the *data* necessary for framing a plan have been collected (Gund)—9,888 acres.

(4) Area not included under (1), (2) or (3), which has been split up into compartments—20,994 acres.

59. The total area dealt with, including that under (4), is 151,244 acres. The total cost up to date has been Rs. 121,999, and the cost per acre Rs. 0-12-9.

60. To the above must be added the areas in Khálápúr and Karjat for which working-plans have been prepared. These areas aggregating 48,797 acres were handed over from the Northern Circle on the 1st November, 1891.

61. The result of last year's working was:—

	Lines 10'—15' broad.			Linear miles surveyed.	Posts fixed.	Test-trees felled.	Number of compartments formed.	Test-area estimated.	Area for which *data* for the preparation of working-plans were collected.	Total cost incurred.	Cost per acre.
	Cleared of re-growth, &c.	Jungle cut and cleared.	Total cut and cleared.								
		Miles.	Miles.	Miles.	No.	No.	No.	Acres.	Acres.	Rs.	Rs. a. p.
Party I	...	100·12	100·12	105·82	352	82	19	2,708·81	10,105·7	20,238	
Party II	...	40·427	40·427	43·7	784	77	18	937·85	9,994·6	13,753	
								Total...	20,100·3	33,991	1 11 ½

62. The causes of the abnormal increase in cost have been referred to above. The increase in the proportion of test-area to total area examined was, in my opinion, excessive, and need not be continued.

II.—WORKING OF THE YEAR.

(*a*). Communications and Buildings.

63. Form 51 shows the various works constructed during the period under report. The outlay on communications amounted to Rs. 2,353, and on buildings to Rs. 6,268.

64. In the Northern Division of Kánara, a drive 500 feet long, connecting the Haliyál timber-depôt with the main road, was made at a cost of Rs. 261. Two wells were constructed, one in the Haliyál-depôt and the other near the Sámbráni watch-house, for Rs. 300 each. Repairs to existing forest-roads were made (Rs. 249) and to existing watch-houses and other forest-buildings (Rs. 307).

65. In the Central Division of Kánara, the Kannigeri-Udámaki forest-road was repaired and extended by 1·06 miles (Rs. 200). One new forest watch-house was built for Rs. 300, and old watch-houses were repaired (Rs. 1,648). The well at Wadgatti was completed (Rs. 202) and Rs. 384 spent on deepening the well at Kolikeri.

66. In the Southern Division of Kánara, Rs. 507 were spent on repairs to forest watch-houses, &c. Two wells were constructed at a cost of Rs. 340, and the well in the Singanhalli timber-depot completed (Rs. 149).

67. In Belgaum, repairs to the Halshi-Nágargáli forest-road cost Rs. 1,056, and to guard-and rest-houses Rs. 483.

68. In Dhárwár, a depôt-house was built for Rs. 999.

69. In Kolába and Ratnágiri, the expenditure under this head was confined to repairs (Rs. 146).

(*b*). Protection of Forests from Injury.

(1). *General Protection and Breaches of Forest Law.*

70. The following statement shows the number of prosecutions for breaches of Forest Rules during the years 1891-92 and 1892-93 :—

Divisions.	Cases of year 1891-92.							Cases of year 1892-93.							Percentage of failures.	
	Pending in Court on 1st April 1891.	Taken into Court during the year.	Total.	Disposed of by Magistrates during the year.			Pending in Court on 31st March 1892.	Pending in Court on 1st April 1892.	Taken into Court during the year.	Total.	Disposed of by Magistrates during the year.			Pending in Court on 30th June 1893.	1891-92.	1892-93.
				Convictions.	Acquittals.	Total.					Convictions.	Acquittals.	Total.			
Northern Division, Kánara	...	21	21	10	11	21	...	...	119	119	68	48	116	3	52	41
Central Division, Kánara	...	20	20	16	4	20	...	...	18	18	10	8	18	...	20	44
Southern Division, Kanára	1	6	7	5	2	7	...	...	100	*100	83	7	90	...	28	8
Belgaum	4	36	40	27	12	39	1	1	141	142	126	14	140	2	31	10
Dhárwár	...	7	7	6	1	7	...	...	29	29	18	9	27	2	14	33
Bijápur	1	8	9	8	...	8	1	1	14	15	14	1	15	...	...	7
Kolába	5	122	127	103	19	122	5	5	133	138	102	32	134	4	16	24
Ratnágiri	...	29	29	21	7	28	1	1	35	36	17	18	35	1	25	51
Total ...	11	249	260	196	56	252	8	8	589	597	438	137	575	12	22	24

* Ten cases were withdrawn, as the accused died.